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Does the media system matter? A multilevel analysis of the impact of the press on voting propensities in established democracies

Lisa Mueller^a and Bruno Wueest^b

University of Zurich

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^a Centre for Democracy Studies Aarau (ZDA), Villa Blumenhalde, Kuettigerstrasse 21, 5000 Aarau, Switzerland. E-mail: lisa.mueller@zda.uzh.ch

^b Department for Political Science, Affolternstrasse 56, 8050 Zuerich, Switzerland. E-mail: wueest@ipz.uzh.ch

Abstract

In modern democracies elections are considered the central mechanism for people to control their political representatives. Yet, an effective control requires both knowledge of incumbents' past performance and visibility of alternative party options in electoral contests. This paper evaluates how the media system contributes to these premises. By means of cross-national and multilevel analysis, we test whether well-balanced and critical media coverage mobilizes voters and levels out the impact of individual prerequisites for political participation. Our results indicate, first, that ideologically biased press systems lead to higher turnout and reduce the importance of personal resources and characteristics. Second, we find that the more often newspapers cover improper behavior by officials, the less likely voters are to cast a vote.

1 Introduction

Despite the growing importance of various other forms of political participation, elections remain a key feature of modern representative democracies. By shaping the composition of the government and by forcing political representatives to consider the citizens' interests in their policy-making, periodical elections are supposed to foster the responsiveness of the democratic system (Teorell, 2006). However, responsiveness requires that people express their preferences at the polls (Verba et al., 1995; Teorell et al., 2006). According to Lijphart (1997), the fewer people vote in elections, the more certain societal groups are systematically excluded from the political process. From this point of view, high turnout levels are desirable for a well-functioning democratic regime. Yet voting presupposes a basic knowledge of electoral campaigns. In other words, a modicum of time and effort is needed to cast a vote. And as turnout statistics show worldwide, participation levels in elections tend to be decreasing since the 1960s (Lijphart, 1997).

In this contribution we argue that media and especially print media can provide valuable incentives for individuals to cast a vote. Mass media play an increasingly crucial role in contemporary democracies since they are the main source of information for the vast majority of the electorate (de Vreese and Semetko, 2004, p. 14). More specifically, we assume that media can be an important mobilizing force in elections if, on the one hand, they present voters with the full range of electoral alternatives and thereby help them find their preferred vote choice. On the other hand, by covering official malpractice, they should enhance the voters' ability to judge and retrospectively sanction the performance of office-holders. Media, like other context factors, are thereby expected to substantially influence the environment around individuals, providing them with the necessary cues for political participation (Schmitt-Beck and Mackenrodt, 2010; Rosenstone and Hansen, 1993).

The aim of this paper is to test how the practice of the press in the two respects just mentioned affects the willingness of individuals to choose parties and participate in elections. Our study is based on multilevel analyses of a large range of countries. The individual-level data to test our assump-

tions is taken from large-scale international surveys. The indicators that capture the practice of the press focus on information about a country's press system as well as a new dataset compiled by means of a comprehensive computer-assisted content analysis.

The paper is structured as follows: section 2 and 3 revise the theoretical and empirical literature on the subject and derive the central expectations. Section 4 discusses the design of the study as well as the data and methods used. The results of the analyses are presented in section 5. Finally, section 6 summarizes the findings and concludes.

2 The determinants of electoral turnout

The literature on the determinants of voter turnout is of course abundant. Most of the existing election research focuses on individual characteristics to explain whether citizens take part in elections or not (cf. Schmitt-Beck and Mackenrodt, 2010). Following Teorell (2006), there are two main causes of participation. First, individual resources affect people's capacity to vote. This includes physical capital, such as income, wealth and spare time (Norris, 2000), social capital in the form of social networks (Coleman, 1988; Putnam, 1993), and human capital, which comprises education as well as "political sophistication" (Luskin, 1987). Sophistication requires skills and knowledge, such as the citizens' perception of their political comprehension (internal efficacy), their ability to evaluate government performance, or to place parties and themselves onto the left-right scale (Luskin, 1987; Teorell, 2006; Teorell, et al. 2006). The second cause of participation is the people's motivation to vote. Important factors to capture motivation are an individual's general interest in politics, media news consumption, party identification, satisfaction with life or the way democracy works as well as norms like a perceived civic voting duty (Norris, 2000; Teorell et al., 2006).

However, participation levels do not only differ between individuals, they also vary across different environments in which individuals live (Blais, 2006; Bühlmann, 2006; Franklin, 2004). Franklin (1996, pp. 217f.) even claims that "turnout varies much more from country to country than it does between different types of individuals". According to Lijphart (1997, p. 7), this suggests "that in

order to expand voting in a country with low turnout it is much more promising to improve the institutional context than to raise levels of education and political interest”. Similarly, Franklin (2004) holds that the context and character of a specific election are very important for turnout levels, which for Manin (2007) is increasingly true as party loyalties are declining. Such research on the contextual determinants of electoral participation has mainly considered political institutions (such as the type of electoral system, the degree of direct democracy or compulsory voting), features of the party system (the number of parties and the degree of electoral competition) and socio-economic factors (e.g. a country’s economic performance) (Blais, 2006; Rosenstone and Hansen, 1993: p. 45). Most findings, however, are not robust because they lack a compelling microfoundation, i.e. the analyses are only performed at the aggregate level. Furthermore, our main focus, i.e. the impact of media systems on turnout, has largely been neglected in this tradition of comparative electoral research. This paper therefore makes an effort to provide more insight into the effect of mass media, and more specifically the press, on individual voting propensities in a comparative framework. Moreover, in applying multilevel analysis, we are able to add micro-founded evidence to the broader research on contextual influences on turnout. The next section discusses how mass media can influence electoral participation and outlines shortcomings of previous studies.

3 The role of the media for participation

Mass media are widely considered to be important mobilizing agents who can propel citizens to go to the polls (Schmitt-Beck and Farrell, 2002).¹ Progressing dealignment dissolved the stable ideological ties between voters and parties since the 1960s (Dalton, 1984; Dalton et al., 1984). As a consequence, political ties are ever more established and sustained via the mass media (Bennett and Entman, 2001; Glynn et al., 1999; McAllister, 2002; Ramsden, 1996). More specifically, most citizens only learn about political affairs through the media, and media coverage defines the context in which political leaders are evaluated. De Vreese and Semetko (2004, p. 14) thus even argue that “given the centrality of media in campaigns, common sense suggests that the media are bound to

have effects on the electorate”. In recent years, there has been a constant stream of micro-level studies of how mass media consumption structures whether and – more often – how individual voters cast their vote (cf. Barker and Lawrence, 2006; Schmitt-Beck and Mackenrodt, 2010). There is also an increasing number of studies explaining the effect of media coverage on vote choices or voter mobilization on the aggregate level (cf. Boomgarden and Vliegenthart, 2007).

Yet, despite a growing body of research, the existence and nature of these effects, especially contextual effects of media systems, are still not very clear (Schmitt-Beck and Farrell, 2002). So far, the evidence is often weak, inconclusive or even contradictory. This is due, most notably, to a fundamental lack of comparative studies. Most research focuses on the United States and maybe a few additional countries (Gulati et al. 2004, p. 251; Schmitt-Beck and Farrell 2002, p. 2). However, since media systems and cultures vary greatly across countries (Hallin and Mancini, 2004), so might their influence on recipients. Moreover, the comparative research that does exist has rarely included actual media content (Hellman, 2001; de Vreese and Semetko 2004b, pp. 705f.). This study tries to at least partially overcome these shortcomings by modeling the impact of specific media coverage measures on individual voting propensities across countries. Finally, results of many previous studies are diluted because they do not account for the fact that electorates are not homogenous and thus, media affect different groups of people to varying degrees (Glynn et al., 1999; Lachat and Sciarini, 2002; Schmitt-Beck, 2003; Shehata, 2010; Zaller, 1992). To account for this problem, it is important to analyze how media effects interact with individual characteristics by a multilevel framework.

Besides the question whether media influence voters or not, the literature is also very controversial regarding *how* media coverage actually affects voters and especially their propensity to vote. Most commonly, mass media have been accused of not living up to the normative expectations imposed on them. According to the “video- or media malaise” theory (Newton, 1999; Norris, 2000; Robinson, 1976; Shehata, 2010), political news does not only increasingly consist of short sound bites but also focuses more and more on personalization, scandals and sensational events as well as the con-

flict and competition between political actors instead of substantive political issues (Gerhards, 1994; Gulati et al., 2004; Habermas, 2006; Iyengar, 1991; Patterson, 1998; Rhee, 1997). This development, in turn, is supposed to lead to civic disengagement, mistrust and a crisis of political legitimacy (Glynn et al., 1999, p. 441; Gunther and Mughan, 2000, p. 427; Kleinnijenhuis et al., 2006; de Vreese and Semetko, 2004, p. 16).

Such assumptions are challenged by adherents of a more optimistic view, sometimes coined mobilization theory. Pointing to the rising cognitive mobilization of the population (Dalton, 1996; Inglehart, 1990), they conclude that the amount of substantive news in the media is generally satisfying and does actually foster the citizens' participation, knowledge and trust (Graber, 2004). Accordingly, Norris (2000) finds that attention to newspapers and TV news has a positive impact on turnout in EU elections. In a similar vein, Newton (1999) shows for the United Kingdom that knowledge, interest and confidence in politics increase with more newspaper and TV news consumption.

In this contribution we start from the more promising outlook of mobilization theory and consider mass media as driving force for political participation. However, mobilization theorists often simply look at how individual media consumption patterns affect political behavior without thinking about if and how this depends on actual news contents. By looking at specific features of media coverage and the information environment more generally, we therefore try to detect the mechanisms by which media can promote electoral turnout. To understand why citizens are mobilized by media system features, one has to understand the "essentially social character of political participation" (Schmitt-Beck and Mackenrodt, 2010, p. 392). Citizens do not cast their vote as atomized individuals but are embedded in social networks and exposed to a climate of opinion that can provide them with cues about whether they should go to polls or not. Thus, media also affect individuals because they are an important source of information for their personal environments as well (Katz and Lazarsfeld 1955). More specifically, as with direct effects, we assume that media influence citizens and their personal environments in two ways: On the one hand, voters need to be able to choose from a range of alternatives those candidates or parties which best endorse their preferences. Hence, media

should provide a fair and balanced platform where political contesters can present their positions and programs (Beierwaltes, 2000; Graber, 2003; von Rautenfeld, 2005; Woods, 2007). On the other hand, voters should be capable of evaluating incumbents on the basis of their past actions (Powell, 2004; Ramsden 1996, pp. 74f.). Thus, media should provide information about politics, public affairs and the activities of the political office-holders (Beierwaltes, 2000; Graber, 2003; Lippman, 1923; Norris, 2000). In the following sections we will discuss these two aspects and their implications for turnout in more detail.

3.1 Mass media as a public forum for diverse opinions

In electoral contests both incumbents and their challengers can only compete effectively if they get space and time to make their political positions publicly known (Ferree et al., 2002, pp. 207f.). In other words, the democratic process relies on a pluralistic communication infrastructure which allows all political factions to be heard. This is exactly what McQuail (1992, p. 144) has in mind when he defines media diversity as reflecting differences in society, giving access to different points of view and offering a wide range of choice. Diversity is therefore the key concept here. To be more precise, we are interested in the “diversity of opinions” in terms of the “different viewpoints in political conflicts which are conveyed to the citizens” (Veltmer, 2000, p. 10). We argue that the larger the range of ideological positions represented within a media system, the more likely it is that every political actor finds space to articulate its program, and thus, the more likely it is that voters find their preferred vote choice (Hellman, 2001, p. 184). Moreover, diversity is not only supposed to facilitate voters’ opinion formation. Franklin (2004) argues that the competitiveness of elections, and more specifically the closeness of electoral outcomes is a very consistent determinant of voter turnout. But he only looks at parties’ margins of victory and the largest party’s majority status. A larger incentive for voting than actual closeness of election outcomes, however, should be the perceived competitiveness before the election. In that sense, media diversity might be decisive in shaping citizens’ expectations about how close-fought an electoral contest is. Thus, even voters

who do not rely on the mass media to learn about different party options can be mobilized by a well-balanced media environment simply because this increases their perception of a tight race.

Diversity of opinions can be conceptualized in two ways. First, *internal* opinion diversity requires that a media system exhibits a high share of politically neutral or independent media outlets which are committed to cover the full range of different political opinions. “In their editorials, they either support various standpoints or are generally reluctant to express own preferences” (Voltmer, 2000, p. 11). Internal diversity thus preserves pluralism, even with a restricted choice of newspapers within a particular market (Norris, 2000, p. 28). Second, *external* opinion diversity “permits individual media to be systematically imbalanced” as long as “diversity emerges from the interaction of these actors on the aggregate level of the entire media system” (Voltmer, 2000, p. 10). In other words, politically aligned media organizations have to balance each other out. While some scholars clearly prefer internal opinion diversity because it allows individuals to receive a balanced supply of viewpoints by using just one channel of information (Gunther and Mughan, 2000, p. 423), others acknowledge that biased media organizations in a system of external opinion diversity might provide citizens with helpful guidance for the formation of preferences and also better mobilize them (Norris, 2000, p. 28; Voltmer, 2000, p. 11, 45). Because of this ambiguity between internal and external opinion diversity, we will consider both forms:

H1a: The higher the share of politically neutral media outlets, the higher is an individual’s propensity to vote.

H1b: The better the balance between the political alignments of media outlets, the higher is an individual’s propensity to vote.

We further argue that media mainly boost electoral turnout because they especially help those citizens to shape their preferences who tend to lack the personal resources and motivation to vote. Hence, we expect mass media to work as an equalizing institution which reduces socioeconomic gaps in political participation (Shehata, 2010, p. 298). Learning about the full offer of party alternatives should not only enable voters to develop political preferences and to check them against the

programs of the different competitors but also raise their awareness of the importance of elections. In short, we assume that the more diverse the mass-mediated public forum is, the less important are an individual's prior resources and motivation to participate in elections:

H2: The better the balance between the political alignments of media outlets, the smaller is the influence of personal resources and motivation on an individual's propensity to vote.

3.2 Mass media as public watchdogs

According to representatives of the media malaise theory, media report too negatively about politics in general and focus too much on scandals, which is assumed to demobilize voters. However, elections enable people to retrospectively hold the governing elite accountable for its actions. This, in turn, requires that the citizens can correctly attribute responsibilities. Hence, media act as guardians who constantly monitor the political office holders and make their activities – especially improper ones – publicly visible (Norris, 2000, pp. 28f.). In a similar but more pronounced fashion, Graber (2003, p. 143) posits that media have to „act as a public watchdog that barks loudly when it encounters misbehavior, corruption, and abuses of power in the halls of government“. From this perspective, critical media coverage is therefore a desirable means to empower voters in election campaigns and foster their determination to vote dishonest officials out of office. We therefore expect that:

H3: The more often political actors and institutions are associated with malpractice in the news, the higher is an individual's propensity to vote.

Again, we further assume that if media perform their watchdog function well, they do not only mobilize people but also do so more equally. By serving as “citizens' eyes and ears to survey the political scene and the performance of politicians” (Graber, 2003, p. 143), media should enable even those citizens to deliberately decide on electoral candidates who are less advantaged in terms of individual resources and motivation. We therefore expect an interaction between the media coverage of malpractice and individual characteristics of voters:

H4: The more often political actors and institutions are associated with malpractice in the news, the smaller is the influence of personal resources and motivation on an individual's propensity to vote.

4 Data and methods

This section discusses the country samples, the measures and datasets used as well as the multilevel method applied.

The internal and external diversity hypotheses (H1a, H1b and H2) are analyzed on the basis of a sample of 33 countries, which were mainly selected according to data availability.² All of these countries can be considered established democracies (Bühlmann et al., 2011). For the analysis of the malpractice hypotheses (H3 and H4) the country sample has to be reduced to 18 cases on the contextual level. This is because content analysis data is only available for the following countries (see section 4.3 below): Australia, Austria, Canada, France, Germany, Ireland, Italy, Mexico, the Netherlands, New Zealand, Spain, Sweden, Switzerland, the United Kingdom and the United States. Switzerland is split into two cases, the German and the French speaking part, because the Swiss media system is highly segregated along language borders.³

4.1 Main individual-level variables

The main variables of interest on the individual level are electoral participation as dependent and individual resources as well as motivation to vote as independent variables. These are based on survey data. For the European Union member states in our samples, we use the European Election Study (EES) 2004. Data for all the other countries is taken from the 5th wave of the World Value Survey (WVS, 2004-2008). The exact question wordings of all the survey items used and their categories are listed in *table A.1* in the appendix.

4.1.1. Dependent variable

The dependent variable intends to measure whether individuals participate in elections or not. To this aim, we use a survey item assessing prospective vote intentions. It asks for the party respondents would vote for if there were elections tomorrow. We coded all individuals opting for a party or to vote blank or null as voters and all others as non-voters.⁴ Respondents not allowed to vote and other missings were excluded.

The choice of this dependent variable requires some justification since prospective vote intentions are obviously not the same as really taking part in elections. Hence, we are aware of the problem that social desirability and the greater easiness of simply picking a response category than actually going to the polls could lead to overestimated participation rates. A comparison of actual turnout levels and the aggregated prospective voting question indeed shows considerable deviations from the mean turnout rates between 1995 and 2005. However, our tests have shown that these are generally not larger or more frequent than with the vote recall question.⁵ In addition, there are also advantages of using this survey item. First, by analyzing the news coverage just prior to the survey, we are able to connect an individual's resources, motivation and willingness to vote with actual, recent media content. It might be less convincing to explain the impact of mass media by looking at reported political activity in the past (and simultaneously present personal resources and motivation) and by timing the content analysis to the respective previous election. Second, not restricting our analysis to real election periods might help isolate media effects. Some authors pointed out that testing media effects in election campaigns is difficult because it is very unclear if voters are really influenced by the news reports or the political ads of electoral competitors (Glynn et al., 1999, p. 439). So by looking at off-election periods – or at least not election periods exclusively – we can lessen the 'noise' coming from other campaign elements.

4.1.2. *Independent variables*

The independent variables on the individual level measure the citizens' resources and motivation to vote (see *table A.1* in the appendix for details on measurement). Due to limited availability of comparable survey items across the two different surveys and for all countries, it was not possible to include all the factors discussed in section 2 above. As for individual resources, physical capital is measured by income. Human capital consists of education and two proxy indicators capturing political sophistication: one is the respondents' ability to place themselves onto the left-right scale, the other their ability to name the most important problem or aim of their country. Finally, the only comparable social capital factors are whether an individual is member in a trade union (dummy) and how often he or she attends religious services.

The most important indicator to account for individuals' motivation to vote is their level of general political interest. Further, we also consider the individuals' frequency of consuming TV and radio news as well as of reading a newspaper. Finally, we try to capture the respondents' satisfaction with the way democracy works and with the performance of their governments by two proxy variables asking for trust or confidence in the government and in the parliament.

4.2 **Media data**

The media variables are the main factors of interest on the contextual level. As discussed in section 3 we will test both the effects of the media's performance with regard to opinion diversity (H1a, H1b and H2) and their watchdog role (H3 and H4) on the citizens' propensity to vote.

More precisely, we focus on the democratic performance of the press only. This is because it is very difficult to find data material for electronic mass media which is available for a large number of countries and goes back in time, both regarding structural characteristics of media system as well as news coverage. This restriction to the print media, however, entails an advantage for our primary research interest. Mobilizing effects are more strongly ascribed to newspapers than for example television (Schmitt-Beck and Mackenrodt 2010).

4.2.1. *Internal and external diversity*

To assess the political orientations of newspapers, we have chosen a procedure closely based on Voltmer (2000) and coded newspapers' political affiliations by means of expert ratings. The "Political Handbook of the World 2005-2006" (PHW; Banks, Muller and Overstreet, 2005) provides a list of the most important regional and national newspapers for every country, including their circulation and ideological leaning as rated by experts. On the basis of the indicated political affiliations, each newspaper was assigned a Manifesto party family code between 1 and 6. 1 to 3 roughly represent the left side of the political spectrum, 4 to 6 the right side. Newspapers listed as "independent" were considered neutral and therefore received a value of 3.5.⁶

Using these newspaper codes, we created two indicators. The first reflects the aggregate ideological bias of a country's press system, which is basically the inverse of external opinion diversity. It serves as the independent variable for H1b and is calculated by the absolute deviance of the averaged newspaper codes from the center position 3.5.⁷ This bias measure equals 0 if the political orientations of all newspapers average to 3.5, i.e. if they completely balance each other out. By contrast, the bias reaches its maximum value of 2.5 if all newspapers within a country can be characterized by the extreme code 1, or 6 respectively.

The second indicator reflects internal opinion diversity and will be used as independent variable for H1a. It corresponds to the circulation of neutral or politically independent newspapers, i.e. those with the code 3.5, relative to a country's total newspaper circulation.

4.2.2. *Malpractice hypotheses*

Data for the independent variables of the malpractice hypotheses H3 and H4 is taken from a large-scale computer-assisted content analysis of the most read newspaper in every country in the reduced sample. More specifically, the paid daily newspaper with the highest circulation for which electronically archived copies are available was analyzed. The time frames for the content analyses were the six months preceding the survey in each country (see *table A.2* in the appendix for the exact time

frames and newspapers chosen for each of the 17 countries). The sampling of articles within these periods of analysis followed an „artificial week” approach (Bauer, 2000). For every country and newspaper, all articles on the Monday of the first week, the Tuesday of the second week, and so on were selected.⁸

The final indicators are based on the number of appearances of specific concepts in the news media coverage, in our case political actors, political institutions or the mentioning of corruption and similar forms of misconducts in office. To perform a comprehensive search for our concepts, we prepared extensive keyword lists for political parties⁹ (including full names, abbreviations and names of specific regional sections), politicians¹⁰ (heads of states, heads of governments, government ministers, members of parliament (lower chamber) and party presidents), and political institutions (legislative and executive powers) as well as official malpractice¹¹. To ensure their accuracy and sensitivity to specific country contexts, these keyword lists were obtained, extended and translated in multiple steps. Furthermore, to avoid the virulent problem of false positives, we implemented heuristic rules. False positives are found entities that do not match the concept supposed to be found because some search terms are ambiguous.¹² An example of an implemented rule is that a politician is only identified if both the first and last name is found within the same sentence, or if he or she has already been mentioned earlier within the same article.

Table A.3 in the appendix shows the key numbers of our keyword search as well as the results of various reliability assessments. These tests, two of which were only performed for the two extreme cases in terms of the share of relevant articles obtained, were very satisfying. Only the precision of concept recognition in Mexico was somewhat low.¹³

For the purpose of this paper, three indicators were constructed from the content analysis data to analyze the malpractice hypotheses. They measure how often representatives of the government as a whole, the head of government or state¹⁴ in particular as well as the parliament are mentioned along with the keywords capturing corruption and other forms of misconduct in the same paragraph, compared to all appearances of these actors and institutions. This method of connecting different con-

cepts in newspaper articles by a simple distance criterion – such as the appearance in the same paragraph – has proven useful for large-scale analyses (Ruigrok and van Atteveldt, 2007; Wueest et al. 2010).

4.3 Control variables

Finally, some more variables are needed to control for well-known effects in participation research, both on the individual and the contextual or country level. On the individual level, we control for age and gender. Research has often found that people tend to participate more, the older they are (Bühlmann, 2006, p. 59; Norris, 2000, p. 262; Teorell et al. 2006, p. 393). As for gender, many studies have shown that men tend to vote more often than women (Bühlmann, 2006, p. 60; Norris, 2002, p. 139).

As for the contextual level, we limit the selection of control variables to three, taking into account the party system and socioeconomic conditions. As for the former, we include the number of parties in the lower legislative chamber (Henisz, 2006). This is supposed to affect turnout rates, even though the direction of the influence is not clear. On the one hand, a high number of parties offers voters many choices to find the best representatives for their preferences and usually raises the level of political competition in a country. On the other hand, it also increases the likelihood of government coalitions and makes finding the right choice more complicated (Blais, 2006, p. 118; Bühlmann, 2006, pp. 149f.). To account for the socioeconomic context, we use a country's GDP per capita.¹⁵ This is reasonable since there is quite some variance in terms of the economic situation within our country sample. Moreover, there is strong evidence that this is an influential long-term predictor of turnout (Blais, 2006, p. 117). Finally, because of our special choice of dependent variable, we control for the approximate number of days between the survey and a national, parliamentary election, using the closer of either the last or the next general elections. If an election is close or just took place recently, respondents might be more politicized and thus more likely to express vote intentions.

We do not consider any political institutions as control variables because we do not think that they are crucial for our study. The most decisive institutional factor according to some authors is the existence of compulsory voting within a country (Lijphart, 1997, p. 8; Norris, 2000, p. 263). However, while compulsory voting might be a major incentive for citizens to go to the polls, it should not play a big role in hypothetical elections as is the case here. The same goes for the electoral system, which is usually regarded as a crucial variable in electoral studies and taken as a proxy for the decisiveness of elections (Blais, 2006; Franklin, 2004). Moreover, our political control variable, the number of parties, should at least partially capture the electoral system since majoritarian democracies generally have fewer political parties (Blais, 2006, pp. 118f.).

4.4 Multilevel analysis

The hypotheses will be tested by means of multilevel logit regressions.¹⁶ Multilevel analysis allows to study a phenomenon on one level of analysis by taking into account explanatory factors from a higher level of analysis (Bühlmann, 2006; Steenbergen and Jones, 2002). For our purpose, we can explain individuals' willingness to participate by their personal characteristics as well as by certain attributes of the contexts – in our case countries – they live in. Additionally, it is possible to test cross-level interactions. In other words, it can be analyzed how the relationship between an independent and the dependent variable on the individual level varies across contexts and according to contextual factors. This will be useful to test our expectations about the influence of the media variable on individual resources and the motivation to vote.

5 Results

Turning to the results of our analyses, section 5.1 discusses the impact of the balance of the press system on individual willingness to vote, following the expectations outlined in the hypotheses on internal and external diversity. Section 5.2 then turns to the effects of the amount of news reports

about misconduct by different political actors and institutions on voting propensities in order to test the malpractice hypotheses.

5.1 The impact of internal and external opinion diversity on the likelihood of voting (H1a, H1b and H2)

In order to analyze H1a and H1b, we use the larger sample of 33 countries and rely on media variables which capture the degree of ideological pluralism or neutrality of a country's press system. *Table 1* shows the respective results of a series of multilevel logit regression models. They follow a stepwise procedure. In a first step, an empty model without explanatory variables is estimated in order to test whether the dependent variable varies significantly across contexts. This indicates whether a multilevel model is appropriate. Second, the individual-level variables are introduced in model 2. Finally, the effects of both the individual- and the contextual-level variables together are estimated in the models 3 and 4.

[*Table 1* about here]

The empty model shows that the contextual variance of the intercept associated with the dependent variable is highly significant. This means that the average individual voting propensity varies across countries. The context is therefore important and estimating a multilevel model is justified.

Moving to model 2, we observe that most of the individual determinants of turnout are significant and have the expected positive effects. The level of individual political interest seems to have the largest influence, followed by the respondents' ability to place themselves onto the left-right axis. Furthermore, following news on television or radio also has a positive effect on voting propensity, which corresponds to the findings of earlier cross-country studies and provides evidence in favor of the mobilization theory (Norris, 2000). Surprisingly, this does not apply to newspaper reading. However, since the requirement to be counted as a newspaper reader is quite weak (reading a news-

paper at least once a week), almost all respondents belong to this category. Further, the insignificant coefficient of education is very puzzling. This might be due to the fact that this variable is measured by the age when respondents completed their full-time education. A more appropriate indicator would capture the highest level of education that an individual achieved, but unfortunately, this item was not available in both of the surveys that we used. While the age when completed full-time education is undoubtedly related to the highest level of education achieved, the former is still an imperfect proxy for the latter.¹⁷ Finally, gender is not a significant predictor of turnout when controlling for other individual characteristics.

Model 3 includes the main contextual variables of interest. As *table 1* illustrates, the first coefficient on the contextual level is not significant. This shows that contrary to H1a, a higher share of neutral newspapers within a country does not lead to a higher voting probability. The second media variable, by contrast, does have a significant effect on electoral participation, even if just weakly so. However, contrary to the negative relationship expected in H1b, the coefficient is positive. Hence, the more a press system is skewed towards either the left or the right side of the political spectrum, the more people express their willingness to vote. This result remains robust even when we control for various other contextual factors. Except for the number of parties, which positively affects the likelihood of voting, the control variables are not significant.

Our analysis suggests that proponents of external opinion diversity rightly assume that media's endorsements of specific political camps can provide citizens with helpful cues to make vote choices. Voltmer (2000, p. 11) argues that the growing volatility of the American electorate may be related to the predominance of neutrality in mass communication. However, external opinion diversity assumes that there is a high competition between media outlets with different political ideologies which each mobilize the citizens with the same political viewpoints and considers a lack of diverging affiliations in the public sphere dangerous: "The role of the news media as a civic forum becomes problematic if most major news outlets consistently favour only one party or viewpoint [and] if they exclude minor parties or minority perspectives" (Norris, 2000, p. 28). But our analysis im-

plies that it is not about individual newspapers each providing incentives to different groups of voters but rather about the climate of opinion as a whole. Apparently, a uniformly biased public debate facilitates opinion formation more than a public debate which is segregated along political conflict lines.

While this finding is probably not in line with normative expectations about how the democratic process is supposed to be working, it nevertheless leads to the desired outcome, at least with regard to political participation: in biased press systems more people are able to make up their minds about which party they prefer and are willing to take part in elections.

To test how the media system affects the relationships between individual resources and motivation on voting propensities (H2), we checked model 4 in *table 1* for cross-level interactions between the media system variables and individual-level effects. Since only the degree of ideological bias in press systems turned out to be significant, we restricted the analysis of cross-level interactions to this indicator.

[*Table 2* about here]

Column 2 in *table 2* shows if the slopes of the respective individual-level effects significantly vary between the different countries. If so, we tested whether these variances can be accounted for by the contextual variable measuring the degree of ideological bias in a country's press system. In other words, we checked whether there is a significant interaction term between the two variables holding the individual-level effect at random. These interaction terms are listed in column 3.¹⁸

The coefficients in *table 2* indicate that all but three of the individual-level effects vary across the countries. Moreover, four effects can be explained by the contextual variable. Interestingly, they are all negative. This means that the influence of personal resources in terms of political sophistication (ability of self-placement) and social capital (church-going) as well as in terms of personal motiva-

tion (political interest and trust in government) on the likelihood of voting is lower, the more biased a press system is. Hence, personal predispositions become less important determinants of electoral turnout with an increasing bias in the press system. This suggests that especially those groups of people who rather tend to abstain from going to the polls rely on the cues that they receive from a biased climate of opinion.

From the perspective of citizen representation and responsiveness, this finding is very desirable. If the less advantaged in terms of personal resources and motivation are mobilized, their interests are better represented in the political decision-making process. However, it is arguable whether the vote choices that the politically less interested and less sophisticated make in a biased media environment are also more competent. One could assume that citizens are not presented the full range of electoral alternatives in biased press systems and thus express vote intentions in line with the general direction of the public debate but not with their own, intrinsic preferences. This would be in line with Zaller's (1992) RAS model, which holds that individuals with low political awareness do not reflect media messages in light of their own predispositions as critically as their politically more aware fellow citizens, if they pay attention to the elite discourse in the first place.

5.2 The impact of the media's watchdog role on the likelihood of voting (H3 and H4)

Since we rely on data from the content analysis to test the malpractice hypotheses H3 and H4, we turn to the smaller sample of 18 cases on the contextual level. This of course means that the results obtained in multilevel analyses have to be interpreted cautiously. *Table 3* presents our results concerning the impact of media acting as watchdogs on voting behavior. Because of the low number of cases on the contextual level we only include one contextual variable in each of the models 3 to 5.

[*Table 3* about here]

The empty model again confirms our assumption that voting probabilities vary across contexts. Furthermore, the effects of the individual determinants (model 2) are very similar to those estimated for the larger country sample in *table 1*. The exceptions are income and trust in the government, which are not significant anymore in *table 3*.

Looking at the contextual effects, we observe that all of the four coefficients have significant negative effects. These findings are quite remarkable, and they suggest that citizens are actually put off by media coverage accusing political office-holders of improper behavior. The more frequently media portray political elites critically, the lower is an individual's propensity to vote. Furthermore, it is not surprising that the effect is strongest for the head of state or of government respectively, followed by the government as a whole and finally the parliament. The government, and especially its highest representative, is generally more exposed to and watched by the media and the public alike than parliamentary actors.

As already mentioned, because of the low number of countries in the sample, we did not want to include more than one contextual variable per model. Nevertheless, to test the robustness of the media effects, we also estimated models 3 to 5 with our contextual control variables, introducing only one at a time.¹⁹ With two exceptions, all the malpractice effects remain significant. Only the impact of media coverage about misconduct on the part of the government and on the part of the parliament is not significant anymore when controlling for the number of days to or since a general election.²⁰ As for the other two control variables, similar to *table 1*, only the number of parties affects the likelihood of voting.

In addition to our three usual control variables, we also controlled for two other factors. The first one is a country's level of corruption. Obviously, in countries where more official malpractice takes place, there should be more media coverage about it. Hence, it could be argued that with the content analysis data we rather capture the degree of corruption within a country than the media's watchdog performance. So even though our malpractice variables do not only include corruption but also various other forms of misconduct, and even though we believe that actual corruption and the extent of

news reports about it are not necessarily related, we wanted to account for this possibility. For this purpose, we estimated models 3 to 5 including Transparency International's Corruption Perception Index (CPI).²¹ However, this does neither change the media effects, nor could we find a significant impact of the CPI on electoral participation.

As a second additional control variable we included a dichotomous variable assessing whether the newspaper we used in the content analysis is a tabloid or not. Tabloids usually rely more on news values such as conflict, scandals and negativity than quality or broadsheet papers. Thus, it is possible that the amount of media coverage of official malpractice is more determined by the type of news outlet and its style of reporting than its performance as a public watchdog. Again, even when controlling for this factor, the media effects remain robust.

In sum, our results do not support the positive influence of the watchdog function as stated in H3 but rather corroborate the media malaise theory. By reporting about the actions of political elites in a critical way, media tend to drive people away from the polls instead of helping them to make informed choices and hold the culprits accountable.

Although the media's coverage of malpractice by political office-holders does not influence individual voting propensity as expected in H3, we still wanted to analyze how this affects the relationships between individual resources and motivation and the dependent variable. In fact, we could argue that we should now find the opposite of the assumed effects in H4. We therefore checked for significant cross-level interactions again. *Table 4* shows the respective results.

[*Table 4* about here]

Looking at the contextual variances of the individual-level effects reveals that in every of the models 3 to 5 (*table 3*) the effects of income, the ability of ideological self-placement, political interest, reading newspapers and of the two trust items vary across countries. Additionally, watching TV

news has a significant contextual variance in model 4. But moving to the cross-level interaction terms, we observe that almost none of these variances can be explained by the media variables. Given our earlier finding, which revealed that when mass media mobilize citizens their personal resources and motivation to vote become less important, we could have expected the opposite here: if people are less likely to vote when there is much critical news coverage, personal resources and motivation should become more decisive for electoral participation. However, as the insignificant cross-level interactions indicate, this is not the case. This suggests that citizens are equally put off by media reports of official misconduct. The only exception to this is trust in the parliament: the effect of this variable on the probability of voting is found to vary in terms of how often the government and the parliament are being scandalized by the media. Quite plausibly, the more political elites are associated with malpractice in the media, the higher the likelihood of voting for those who trust the parliament compared to those who do not.

6 Conclusions

In this paper, we set out to explore how press coverage affects electoral participation. More specifically, we were interested in the performance of newspapers in two respects that are important in the democratic process and how this relates to individuals' likelihood of voting in elections.

First, we argued that media should provide a diverse public forum which gives space to all political forces in a society. We assessed this by the average political direction of a press system and expected a positive impact of a well-balanced press on individual voting propensities. However, this assumption was not confirmed by our data. Instead, we found the opposite effect: the more a press system leans towards a specific ideological direction, the more people are mobilized. This suggests that if a country's overall climate of opinion as generated by the media discourse is biased towards either the left or the right, citizens find it easier to make vote choices. Although this finding is probably not in line with mobilization theory and certainly not with common normative concepts of democracy, it nevertheless shows that mass media can be mobilizing agents in elections. Moreover,

our analysis of cross-level interactions indicates that biased press systems help especially those voters to make up their minds about their party preferences who are less advantaged in terms of political sophistication, social capital, and have less political interest and trust in the government. This, however, leaves us wondering what these results mean for the quality of vote decisions. But in the absence of further analyses, this remains an open question.

Second, we stated that media serve as a public watchdog which seeks “to expose official corruption, corporate scandals, and government failures” (Norris, 2000, pp. 28f.). We assumed that the better the press performs this role, and thus the more often political actors and/or institutions are associated with malpractice in the news, the higher is the citizens’ desire to vote in order to throw the rascals out of office. Again, this expectation did not hold in our analyses. Quite on the contrary, the higher the share of critical media coverage, the lower was individual likelihood of voting, regardless of which constitutional actor or institution was the subject of scrutiny. These rather uniform effects indicate that the newspapers we analyzed do not distinguish between different types of actors. For example, if the government is often scandalized in a newspaper, so is the parliament. Additionally, we only found one effect of critical media coverage on the relationship between individual characteristics and voting propensity: trust in the parliament becomes a much stronger determinant of voting in countries where the media cover more official malpractice.

In sum, with the exception of H2, none of our results support the hypotheses formulated in section 3. Our findings for the media’s public forum function are ambivalent regarding their evidence for mobilization theory as well as their implications for democracy and responsiveness. As for the media’s watchdog role, our results lend support to the media malaise theory. Hence and even though we observe positive effects of simple media exposure on the individual level, it is difficult to uphold the optimistic outlook of mobilization theory in our case. Obviously, it is not enough to only look at the relationship between media exposure and voting behavior as most mobilization theorists do. In fact, if one looks more closely at the contextual impact of media content, the story is not so simple.

In concluding we also have to note that we have only provided tentative results. This contribution is a first attempt to gain more insight into the impact of media coverage on voters in various countries and to explore the data generated by a large-scale content analysis. Our results must therefore be considered preliminary. Accordingly, we are aware of the limitations of our analyses and more detailed examinations as well as robustness checks are needed to draw solid conclusions. First and as already discussed, our dependent variable is not ideal for really capturing the people's participation levels and choices. Second, estimating multilevel regression models with only 18 cases on the contextual level is not sufficient to establish robust results. Third, much more detailed analyses are needed to uncover the diverse and complex effects that media coverage seems to have. For example, our results concerning the malpractice hypotheses suggest that taking into account the quality of media coverage instead of the simple quantity would be worthwhile. Finally and most notably, we have only studied one newspaper per country. Even though we tried to choose the largest newspaper, this does only allow limited conclusions about the impact of mass media systems in a country. The analyses provided in this paper, however, have confirmed our conviction that data generated by computer-assisted content analysis has a lot of potential.

Notes

1. Especially newspapers and television, which are usually cited as the main sources of information by citizens all over the world (de Vreese and Semetko 2004).
2. Australia, Austria, Brazil, Bulgaria, Canada, Chile, Cyprus, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, India, Ireland, Italy, Japan, Mexico, the Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, the United Kingdom and the United States.
3. We considered doing the same for Canada. Unfortunately, no Canadian newspapers in French were available for our content analysis.
4. All individuals answering "I would not vote", "none", "refused" (EES only), "no answer" or "do not know" were coded as non-voters. The last few of these categories could be questioned. However, we argue that if individuals did not know which party to choose or refused an answer they would probably not go to the polls if there really

were elections the following day. It is of course possible that those who refused an answer would vote, but simply were reluctant to give away their vote choice. However, comparing this category with the question on general party preference as well as on left-right self-placement shows that not responding to the prospective vote questions is rather related to cluelessness than discomfort with naming his or her preferred party or ideological predisposition.

5. In fact, in 14 out of 33 countries the reported prospective participation rates differ less than five percentage points from real average turnout between 1995 and 2005. In six countries, the differences are between five and ten percentage points, while in the remaining 13 countries they are larger than ten points. Looking at retrospective participation levels, the corresponding numbers of countries are three, five and 25. Moreover, the bias in prospective vote intentions does not always overestimate real electoral turnout. In 13 of the 33 countries, aggregate vote intentions are lower than actual turnout.
6. Additional sources were used to define the most important newspapers (World Press Trends (various years); World Association of Newspapers) and to crosscheck the political ratings in the PHW (Hans-Bredow-Institut, 2002; Kelly et al., 2004; Østergaard, 1992; Wikipedia (<http://www.wikipedia.org/>); Worldpress.org (<http://www.worldpress.org/>); Mondo Times (<http://www.mondotimes.com/>)).
7. The following formula illustrates this: PA_i is a newspaper's political affiliation, C_i its circulation and F_i its frequency of weekly appearance. Accounting for C_i and F_i ensures that smaller newspapers and non-dailies receive less weight in the calculation of external opinion diversity.

$$Bias = \left| 3.5 - \frac{\sum PA_i \cdot C_i \cdot F_i}{\sum C_i \cdot F_i} \right|$$

8. Saturdays and Sundays were excluded, and holidays were replaced by the closest publication day.
9. To assess the relevant parties during the observation period, we relied on data provided by the Social Science Research Centre in Berlin and used all parties which gained at least 1% of all votes in the previous election.
10. The official online services of the respective countries' governments, parliaments and parties as well as Wikipedia provided all information on the relevant politicians.
11. The length of the ontologies of this last concept depends on the language but comprises approximately 150 keywords which can be assigned to one of the following sub-categories: corruption (e.g. "corruption", "blackmail", "bribery"), fraud (e.g. "embezzlement", "fraud", "deceit"), crime/evasion (e.g. "delict", "misdeed", "evasion"), scandal (e.g. "scandal", "gossip"), or general negative reporting (e.g. "infamy", "dishonor", "atrocious").

12. A good example is the widespread English name “Brown”. On the one hand, such a frequent name can refer to many other persons than the targeted Mr. or Ms. “Brown”. On the other hand, “brown” is also an adjective indicating a color.
13. These problems were mainly due to the high complexity of Mexican names. For example, the difference between the two names José Julio Gonzalez Garza and José Gonzalez Morfin is subtle and thus difficult to make for automated entity recognition, because both politicians have José as main first name and Gonzales as main last name.
14. We focused on the most powerful office in each country. This for example applies to the Chancellor in Germany, the Prime Minister in the United Kingdom and the President in Mexico.
15. Source: OECD Economic Outlook (five-year average).
16. We use MLwiN software.
17. Overall, using the WVS cases for which both survey items are available, we only find a moderate correlation between the two (0.53). Separate correlations for each country reveal quite a large variation from 0.39 (USA) to 0.86 (Bulgaria). However, the mean of these country-specific correlations is still only 0.60.
18. Each line in *table 2* represents a single regression model with only the respective individual-level effect randomized. The rest of the coefficients in model 4 are omitted here because they do not really change when the cross-level interactions are included.
19. Due to limited space, we do not report the effects of the contextual control variables in *table 3*.
20. However, the control variable itself does not have a significant effect either so there might be a problem of multicollinearity.
21. Source: http://www.transparency.org/policy_research/surveys_indices/cpi/2009 (05/31/2010). For every country, we selected the CPI from the year the opinion survey we used for the individual-level data was conducted.

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Appendix

Table A.1: List of survey variables

Indicator	EES items	WVS items
Voting	V114: And if there was a general election tomorrow, which party would you vote for? Recoded: “none”, “refused”, “would not vote” and “d/k, n/a” → 0; else → 1.	V231: If there were a national election tomorrow, for which party on this list would you vote? Recoded: “None”, “I would not vote”, “Don’t know” and “No answer” → 0; else → 1
Vote intention (left / right)	Based on V114. Left/right assignment according to Manifesto left-right scale	V231. Left/right assignment according to Manifesto left-right scale
Income	V230: Income scale (scale of 1 - 5)	V253: On this card is a scale of incomes on which 1 indicates the “lowest income decile” and 10 the “highest income decile” in your country. We would like to know in what group your household is. Recoded: 1 and 2 → 1; 3 and 4 → 2; 5 and 6 → 3; 7 and 8 → 4; 9 and 10 → 5.
Education	V216: How old were you when you stopped full-time education?	V239: At what age did you (or will you) complete your full time education, either at school or at an institution of higher education? (New Zealand imputed from V238)
Ability naming important problems/aims of country	V319 / V028: Of those you have mentioned what would you say is the single most important problem? Recoded: “none” and “no response” → 0; else → 1.	V69: People sometimes talk about what the aims of this country should be for the next ten years. On this card are listed some of the goals which different people would give top priority. Would you please say which one of these you, yourself, consider the most important? Recoded: “No answer” and “Don’t know” → 0; else → 1.
Ability of left-right self-placement	V134: In political matters people talk of “the left” and “the right”. What is your position? 10-point scale. Recoded: any number on scale → 1; “refused” and “d/k, n/a” → 0.	V114: In political matters, people talk of “the left” and “the right.” How would you place your views on this scale, generally speaking? 10-point scale. Recoded: any number on scale → 1; “refused” and “d/k, n/a” → 0.
Trade union membership	V215: Are you yourself a member of a trade union or is anyone else in your household a member of a trade union? Recoded: “yes, I am” and “yes both” → 1; else → 0.	V27: Now I am going to read off a list of voluntary organizations. For each one, could you tell me whether you are an active member, an inactive member or not a member of that type of organization: labor union? Recoded: “Active member” and “Inactive member” → 1; “Don’t belong” → 0.
Church attendance	V229: How often do you attend religious services: several times a week (1), once a week (2), a few times a year (3), once a year or less (4), or never (5)? Reversed.	V186: Apart from weddings and funerals, about how often do you attend religious services these days? More than once a week (1); Once a week (2); Once a month (3); Only on special holy days (4); Once a year (5); Less often (6); Never, practically never (7). Recoded: 1 → 5; 2 → 4; 3 and 4 → 3; 5 and 6 → 2; 7 → 1.
Interest in politics	V154: To what extent would you say you are interested in politics? Scale from 1 (very) to 4 (not at all) → Reversed.	V95: How interested would you say you are in politics? Scale from 1 (Very interested) to 4 (Not at all interested) → Reversed.
TV news exposure	V034: Normally, how many days of the week do you watch the news on television? Scale from 0 (never) to 7 (every day). Recoded: “never” → 0; else → 1.	V224: For each of the following sources, please indicate whether you used it last week (1) or did not use it last week (2) to obtain information: news broadcasts on radio or TV. Recoded: 1 → 1; 2 → 0.

		(New Zealand constructed from original New Zealand WVS dataset)
Newspaper exposure	V069: And how many days of the week do you read a newspaper? Scale from 0 (never) to 7 (every day). Recoded: “never” → 0; else → 1. V070 (Sweden only): Do you usually read one or several newspapers regularly? With regularly I mean at least one time a week? 0 = no; 1 = yes.	V223: For each of the following sources, please indicate whether you used it last week (1) or did not use it last week (2) to obtain information: daily newspaper. Recoded: 1 → 1; 2 → 0. (New Zealand constructed from original New Zealand WVS dataset)
Trust/confidence in government	V131: Please tell me on a score of 1-10 how much you personally trust each of the institutions I read out: [country] government. Scale from 1 (not trust at all) to 10 (complete trust). Recoded: 1 and 2 → 1; 3 and 4 → 2; 5 and 6 → 2.5; 7 and 8 → 3; 9 and 10 → 4.	V138: I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence (1), quite a lot of confidence (2), not very much confidence (3) or none at all (4): the government (in your nation’s capital)? Reversed.
Trust/confidence in parliament	V129: Please tell me on a score of 1-10 how much you personally trust each of the institutions I read out: [country] parliament. Scale from 1 (not trust at all) to 10 (complete trust). Recoded: 1 and 2 → 1; 3 and 4 → 2; 5 and 6 → 2.5; 7 and 8 → 3; 9 and 10 → 4.	V140: I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence (1), quite a lot of confidence (2), not very much confidence (3) or none at all (4): parliament? Reversed.
Age	V218: What year were you born? Recoded to reflect age in years.	V237: This means you are ____ years old.
Gender	V217: Are you ... [gender]? 1 = male; 2 = female. Recoded: “male” → 1; “female” → 0.	V235: Respondent’s sex. 1 = male; 2 = female. Recoded: “male” → 1; “female” → 0.

Table A.2: Country sample 2 including data sources and newspaper characteristics

Country	Year	Time period	Newspaper	Rank ^{a)}	Tabloid
Australia	2005	May - Oct. 05	Herald-Sun	1	Yes
Austria	2004	Jan. - June 04	Die Presse	6	No
Canada	2006	Oct. 05 - March 06	Toronto Star	1	No
Czech Republic	2004	Jan. - June 04	Mladá fronta Dnes	2	Yes
Denmark	2004	Jan. - June 04	Jyllands-Posten	1	No
France	2004	Jan. - June 04	Ouest-France	1	Yes
Germany	2004	Jan. - June 04	Süddeutsche Zeitung	4	No
Ireland	2004	Jan. - June 04	Irish Independent	1	No
Italy	2004	Jan. - June 04	Corriere della Sera	1	No
Mexico	2005	June - Nov. 05	Reforma	6	No
Netherlands	2004	Jan. - June 04	De Telegraaf	1	Yes
New Zealand	2004	July - Dec. 04	New Zealand Herald	1	No
Spain	2004	Jan. - June 04	El País	1	No
Sweden	2004	Jan. - June 04	Svenska Dagbladet	5	No
Switzerland (German)	2007	Jan. - June 07	Blick	1	Yes
Switzerland (French)	2007	Jan. - June 07	24 Heures	1	Yes
United Kingdom	2004	Jan. - June 04	The Sun	1	Yes
United States	2006	April - Sept. 06	USA Today	1	Yes

Notes: a) Rank among top ten paid-for dailies in terms of circulation according to World Press Trends 2005 (WAN).

Table A.3: Content analysis: key numbers and reliability

Country	Number of articles in sample	Share of relevant articles in % ^{a)}	Article recall (Cronbach's α) ^{b)}	Number of entity hits	Precision entity hits ^{c)}	Precision of party recognition (Cronbach's α) ^{d)}
Australia	6,199	29.7		6,197		0.904
Austria	2,772	47.2		8,617		0.932
Canada	3,693	43.9		11,166		0.975
Czech Republic	15,003	61.4		49,724		0.834
Denmark	5,138	45.3		12,301		0.918
France	10,286	47.6		17,622		0.971
Germany	5,248	42.2		15,447		0.957
Ireland	3,760	46.2		8,155		0.945
Italy	10,233	36.9		19,885		0.865
Mexico	5,923	61.9	0.913	29,055	79.0	0.977
Netherlands	3,242	32.3		3,625		0.955
New Zealand	2,443	47.0		6,176		0.953
Spain	5,178	57.0		25,326		0.997
Sweden	2,935	34.8		5,324		0.972
Switzerland (German)	1,904	19.0	0.895	1,734	95.6	0.973
Switzerland (French)	5,559	38.5		7,163		0.888
Britain	9,035	36.3		7,762		0.926
USA	1,935	39.1		3,745		0.989

Notes: a) Articles containing at least one actor or institution; b) Reliability between automated search and manual control of 100 articles in Mexico (country with the highest share of relevant articles) and 100 articles in the German speaking part of Switzerland (country with the lowest share of relevant articles); c) Percentage of correct entity recognition in 100 Articles in Mexico and Switzerland (German); d) Correlation of party shares in newspapers and parties vote shares in previous election.

Table 1: Multilevel models predicting willingness to vote by ideological bias of press system

	<i>Empty Model</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
FIXED EFFECTS				
Constant	1.65*** (.18)	-.92*** (.27)	-1.49*** (.37)	-1.95*** (.50)
Individual Level				
Income	-	.13** (.06)	.13** (.06)	.13** (.07)
Education	-	-.55 (.47)	-.55 (.47)	-.55 (.47)
Ability naming most important problem	-	.12** (.05)	.12** (.05)	.12** (.05)
Ability of left-right self-placement	-	.93*** (.07)	.94*** (.07)	.95*** (.07)
Union membership	-	.14** (.05)	.14** (.05)	.14** (.05)
Frequency of church-going	-	.16* (.09)	.16* (.09)	.16* (.09)
Political interest	-	1.48*** (.11)	1.50*** (.11)	1.51*** (.11)
Watching TV news	-	.27*** (.10)	.27*** (.10)	.27*** (.10)
Reading newspapers	-	.03 (.06)	.03 (.06)	.03 (.06)
Trust in government	-	.37*** (.10)	.37*** (.10)	.37*** (.10)
Trust in parliament	-	.70*** (.16)	.70*** (.16)	.71*** (.16)
Age	-	.65*** (.17)	.66*** (.17)	.66*** (.17)
Gender (male)	-	.05 (.04)	.05 (.04)	.05 (.04)
Contextual Level				
% neutral newspapers	-	-	.43 (.70)	.09 (.71)
Degree of ideological press bias	-	-	1.27* (.67)	1.33** (.64)
Number of parties	-	-	-	2.07* (1.42)
GDP	-	-	-	.28 (.48)
Days to/since election	-	-	-	.31 (.68)
RANDOM EFFECTS				
Individual-Level (σ^2)	1 (0)	1 (0)	1 (0)	1 (0)
Contextual Level ($\sigma_{\mu 0}^2$)	1.03*** (.34)	1.08*** (.37)	1.06*** (.37)	1.01*** (.38)
MODEL PROPERTIES				
Number of Cases (Countries)	29,402 (33)	29,402 (33)	29,402 (33)	29,402 (33)
Wald-Test (joint χ^2); (df)	88.26 (1)	727.46 (14)	728.07 (16)	778.45 (19)

Notes: Unstandardized logit coefficients; standard errors in brackets. Estimation: RIGLS, 2nd order PQL. All variables rescaled to range from 0 to 1, so that coefficients are comparable and indicate the change associated with moving from the lowest to the highest value. Cases are weighted by socio-demographic characteristics and sample size. *** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.10$.

Table 2: Cross-level interaction effects of degree of biased press system

Individual-level effect	Contextual variance	Cross-level interaction ^{a)}
Income	.08** (.04)	.05 (.32)
Education	6.30** (2.60)	-.65 (1.99)
Ability naming most important problem	.01 (.02)	
Ability of left-right self-placement	.09** (.05)	-.60*** (.25)
Union membership ^{b)}	.01 (.03)	
Frequency of church-going	.11* (.06)	-.73*** (.38)
Political interest	.25*** (.09)	-1.24*** (.24)
Watching TV news	.13 (.08)	
Reading newspapers	.08*** (.03)	-.11 (.31)
Trust in government	.13* (.07)	-.66*** (.32)
Trust in parliament	.52*** (.19)	-.78 (.66)

Notes: Standard errors in brackets. a) Unstandardized logit coefficients; b) Figures based on model 3. Estimation: RIGLS, 2nd order PQL. Cases are weighted by socio-demographic characteristics and sample size. *** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.10$.

Table 3: Multilevel models predicting willingness to vote by coverage of malpractice

	<i>Empty Model</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
FIXED EFFECTS					
Constant	1.70*** (.17)	-1.11*** (.28)	-.83** (.32)	-.65** (.33)	-.83** (.32)
Individual Level					
Income	-	.08 (.09)	.07 (.09)	.07 (.09)	.07 (.09)
Education	-	.23 (.43)	.22 (.43)	.21 (.43)	.22 (.43)
Ability naming most important problem	-	.16** (.07)	.16** (.07)	.16** (.07)	.16** (.07)
Ability of left-right self-placement	-	.95*** (.12)	.95*** (.12)	.95*** (.12)	.95*** (.12)
Union membership	-	.10** (.05)	.11** (.05)	.11** (.05)	.11** (.05)
Frequency of church-going	-	.15* (.09)	.15* (.09)	.15* (.09)	.15* (.09)
Political interest	-	1.43*** (.19)	1.43*** (.19)	1.43*** (.19)	1.43*** (.19)
Watching TV news	-	.39*** (.12)	.36*** (.12)	.363*** (.124)	.36*** (.12)
Reading newspapers	-	.05 (.09)	.06 (.09)	.06 (.09)	.06 (.09)
Trust in government	-	.19 (.17)	.18 (.17)	.19 (.17)	.19 (.17)
Trust in parliament	-	.73*** (.27)	.73*** (.27)	.73*** (.27)	.73*** (.27)
Age	-	.52*** (.17)	.52*** (.17)	.52*** (.17)	.52*** (.17)
Gender (male)	-	.07 (.05)	.07 (.05)	.07 (.05)	.07 (.05)
Contextual Level					
Misconduct government	-	-	-.83** (.42)	-	-
Misconduct head of state/government	-	-	-	-1.27** (.54)	-
Misconduct parliament	-	-	-	-	-.76** (.37)
RANDOM EFFECTS					
Individual-Level (σ^2)	1 (0)	1 (0)	1 (0)	1 (0)	1 (0)
Contextual Level ($\sigma_{\mu 0}^2$)	.51* (.28)	.57** (.29)	.52** (.24)	.45** (.18)	.53** (.25)
MODEL PROPERTIES					
Number of Cases (Countries)	16,552 (18)	16,552 (18)	16,552 (18)	16,552 (18)	16,552 (18)
Wald-Test (joint chi2); (degrees of freedom)	104.88 (1)	3,865.90 (14)	5,528.82 (15)	10,684.42 (15)	4,086.77 (15)

Notes: Unstandardized logit coefficients; standard errors in brackets. Estimation: RIGLS, 2nd order PQL. All variables rescaled to range from 0 to 1, so that coefficients are comparable and indicate the change associated with moving from the lowest to the highest value. Cases are weighted by socio-demographic characteristics and sample size. *** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.10$.

Table 4: Cross-level interaction effects of critical media coverage

Individual-level effect	Contextual variances			Cross-level interactions ^{a)}		
	Model 3	Model 4	Model 5	Misc. government	Misc. head of state	Misc. parliament
Income	.15* (.07)	.14* (.06)	.15* (.07)	-.15 (.29)	-.22 (.36)	-.16 (.29)
Education	.00 (.00)	.00 (.00)	.29 (.93)			
Ability naming most important problem	.02 (.02)	.02 (.02)	.03 (.03)			
Ability of left-right self-placement	.16* (.09)	.16* (.09)	.16* (.10)	.00 (.24)	-.20 (.29)	-.31 (.30)
Union membership	.00 (.00)	.00 (.00)	.00 (.00) ^{b)}			
Frequency of church-going	.00 (.00) ^{b)}	.02 (.03)	.00 (.00) ^{b)}			
Political interest	.33** (.13)	.33** (.13)	.34** (.13)	-.42 (.45)	-.43 (.45)	-.62 (.47)
Watching TV news	- ^{c)}	.12* (.07)	- ^{c)}		.42 (.32)	
Reading newspapers	.12*** (.05)	.11** (.04)	.12*** (.05)	-.45 (.32)	-.28 (.34)	-.47 (.31)
Trust in government	.26** (.13)	.25** (.12)	.26** (.13)	.25 (.47)	-.31 (.58)	.14 (.48)
Trust in parliament	.61** (.26)	.61** (.29)	.62** (.30)	1.15*** (.33)	.65 (.81)	1.09*** (.39)

Notes: Standard errors in brackets. a) Unstandardized logit coefficients; b) Could only be estimated using IGLS instead of RIGLS; c) Could not be fitted by the software. Estimation: RIGLS, 2nd order PQL. Cases are weighted by socio-demographic characteristics and sample size. *** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.10$.